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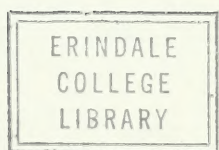
THE INFLUENCE OF THE HORSE IN THE DEVELOPMENT OF PLAINS CULTURE

By CLARK WISSLER

ONE of the important problems pertaining to the Indians of the Plains is the relation of the European horse to their culture. The initial difficulty lies in our inability to determine the precise dates at which the successive tribes came into its possession.

Exploration in the Plains proceeded gradually from the east and south, chiefly during the eighteenth century. Certain Spanish accounts give us some data for the seventeenth and even the sixteenth century, but only for the extreme southern border. The early literature for the Missouri and Saskatchewan valleys is readily accessible, but an exhaustive search in the Spanish and French colonial archives for Louisiana and New Mexico will be necessary before a definite historical statement of the introduction of the horse can be made. However, a general résumé of the literature at hand will give approximate dates at which horses are mentioned for many tribes.

The great Spanish expeditions to explore the southern parts of the United States were well equipped with horses and even cattle and hogs. The adventurers were cavaliers; hence, horses were a necessity. De Soto carried some of his horses across the Mississippi in 1541. At about the same time Coronado reached the present bounds of Oklahoma from Santa Fe. Oñate is believed to have visited the Pawnee and Kansas, 1599-1601, and Peñalosa con-



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ducted an expedition to the Mississippi in 1662. From Coronado's time on there was a growing trade with the Indians of the Gulf coast, and trade to the interior from Santa Fe as a base began about 1600. The pueblo village of Taos soon became the trade center for the Plains Indians. This trade seems to have reached its maximum about 1630. Doubtless the archives of Mexico and Spain contain data on the trade of this period, but nothing definite has so far found its way into literature. It is known, however, that the Indians of the Plains and especially the Pawnee were so troublesome in their plundering raids for horses that a post was established in Kansas about 1704 and an unsuccessful expedition undertaken by Villazur in 1720. Yet, in 1719 du Tisné, a Frenchman, visited two Pawnee villages in Oklahoma where he counted three hundred horses. As early as 1682 Henri de Tonty found horse-using Indians on the lower Missouri.¹ La Salle also states (1682) that the Gattacka (Kiowa-Apache) and Manrhoat (Kiowa?) had many horses.² In fact they found horses in many places. This is about the earliest date we can hope to find for the Missouri, but if horses were there at that time, it is most certain that the Pawnee were well provided with them. It seems, therefore, safe to conclude that some time during the interval 1600-1682, at least, the Caddoan tribes, the Tonkawa, and the Comanche, as well as the Kiowa, became fully equipped with horses. The Metontonta (Oto) came to see La Salle and brought a horse's hoof, stating that the Spanish made war upon them (1680). From the statements by Hennepin we infer that the Oto did not use horses at that time.

It is thus clear that the Indians below the Platte and lower Missouri were quite well supplied with horses by 1682, and there is no reason why many of them should not have had horses as early as 1600. Presumably those to get them first would be the Ute, Comanche, Apache, Kiowa, and the Caddo. As we move northward our historical data become a little more definite.

The sons of La Verendrye made a journey to the Rocky mountains from the Mandan in 1742-43. They encountered horse

¹ See Kansas Historical Collections, vol. IX, p. 241.

² Mooney in Seventeenth Annual Report, Bureau of American Ethnology, p. 160.

Indians, also mules and asses, and on their return to Canada mention the horses of their Assiniboine companions.¹ On this journey to the Rocky mountains they seem to have passed down west of the Black hills and to have reached the mountains in Wyoming or Colorado and on the return trip to have struck the Missouri in Nebraska or South Dakota. They were in fear of the Snake Indians. So far we have not been able to fully identify the tribal names of these explorers, but Beaux Hommes seems likely to be Crow, and Gens de l' Arc to be Cheyenne. Their "Le Grand Chef" was evidently the chief of the Pawnee, and the Chevaux, the Comanche. They fell in with the Prairie Sioux on the return trip. On one point they are definite: that horses were in use all along their route after they left the Mandan country.

Next we turn to the journal of La Verendrye's Mandan discoveries, 1738-39. He set out from a camp of Cree on the Assiniboine river and made the journey overland with a body of the Assiniboine. It is clear that the whole party were afoot, for "the women and dogs carry all the baggage, the men are burdened only with their arms; they make the dogs even carry wood to make the fires, being often obliged to encamp in the open prairie, from which the clumps of wood may be at a great distance."² No mention of seeing horses among the Mandan and the adjoining villages is made. On the other hand, we are told that the Indians gave him to understand "that the Pananas and Pananis had horses like the whites,"³ living to the south of them. One of his Assiniboine companions narrated an engagement with horsemen in armor while his party was in a raid to the Mississippi. Yet, in 1741, when the sons of La Verendrye set out toward the southwest, their statements seem to imply the possession of horses by the Mandan and the neighboring villages.

A little later (1751) Saint Pierre states that he saw horses and saddles which the Indians obtained by trade from the west,⁴ and

¹ Découvertes et établissements des Français dans l'ouest et dans le sud de l'Amérique septentrionale (1614-1754), recueillis et publiés par Pierre Margry, part 6, pp. 589-611.

² Canadian Archives, 1889, 13.

³ Ibid., 21.

⁴ Ibid., 1886, vol. 26, p. clxiii.

notes a report from Fort Lajonquière in the Blackfoot country that the natives there traded for horses and saddles to the westward. This is the earliest suggestion of horses among the Blackfoot peoples.

We may now direct our search to the Hudson Bay posts of the north. Here we can refer directly to the journal of Anthony Hendry¹ who in 1754 set out from York Fort in company with a returning party of Assiniboine to visit the Blackfoot tribes of the west, who to his seeming surprise were well supplied with horses. However, when he returned, his superiors at York regarded such a statement as the grossest of fabrications and in consequence gave little weight to his report. This would seem to indicate that the traders of Hudson bay had never heard of horse Indians. On the other hand, it is clear that the Assiniboine who had regularly visited York Fort for some years could not have been ignorant of the fact, for Hendry states:

"17. Saturday. . . . They are a tribe of the Asinepoet Nation: and like them use the Horses for carrying the baggage and not to ride on." (This restricted use of the horse is very significant.) This confirms the report of horses in the Blackfoot country in 1751.

We have now accounted for practically all the tribes west of the Missouri and around the headwaters of the Saskatchewan. To the east in contact with the Assiniboine were the Plains Cree and Plains Ojibwa. In 1776 Henry states that they had herds of horses like the Assiniboine.² In 1772 Cocking met Cree far to the west, but fails to state that they had horses, though their possession is implied. La Verendrye (1738) makes a curious remark concerning an Indian near the Red river: "as he had his vehicle [voiture] with him," etc. This may signify horses, but we cannot be sure.

For the Dakota and other tribes above the mouth of the Missouri we seem to have negative evidence. As early as 1662 Radisson met a division of the Eastern Dakota in Wisconsin, and from his own quaint account of the manner of transporting baggage it is

¹ Proceedings and Transactions of the Royal Society of Canada. Third series, vol. 1, 1907, p. 307, and vol. 2, p. 89.

² Alexander Henry, Travels and Adventures, etc., New York, 1809, pp. 289, 299.

clear that there were no horses there. These Indians were, it is true, not a typical Plains people, but Radisson tells of journeys to the Mississippi and to the vicinity of the Mille Lacs where he met other Indians of their kind. Nowhere have we noticed any implication that horses were known. From 1665 to 1699 Nicolas Perrot was in frequent contact with the Siouan tribes, but we find in his account no suggestion of horses. Le Sieur penetrated the country of the typical Plains Dakota in 1700, and, though he goes into much detail, we find no hint of horses being in the vicinity. Before his day neither Hennepin nor Du Luth mentions them for the Sioux country.

Then we come to the journal of Peter Pond, 1740-45, where we are told that the Yankton division of the Dakota had horses in abundance:

"Thay Have a Grate Number of Horses and Dogs which Carres there Bageag when they Move from Plase to Plase. . . . Thay Run down the Buffelow with thare Horses and Kill as Much Meat as thay Please. In Order to have thare Horseis Long Winded thay Slit thair Noses up to the Grissel of thare head which Make them Breath Verrey freely. I Have Sean them Run with those of Natrall' Nostrals and Cum in Apearantley Not the Least Out of Breath."¹

Turning again to the Mandan we have no literature until 1804 when Lewis and Clark wintered among them, at which date all the Indians of the Missouri were well supplied with horses; together with the Arikara and Hidatsa they were trading horses and mules to the Assiniboine and Teton Dakota. However, in the journal of J. McDonnell (1793) we are told that at the Missouri the natives used horses to hunt buffalo.

The result of our survey is then quite definite. Horses were numerous among the Blackfoot as early as 1751, and they were used by the Assiniboine about the same date. They had not been acquired by the Mandan in 1738, but were among their immediate neighbors to the south. They are first definitely mentioned for the Teton Dakota in 1742, and for the Yankton at about the same date. The Iowa seem to have had some horses in 1724.²

¹ Collections of the State Historical Society of Wisconsin, vol. XVIII, p. 353.

² "In 1719, Du Tisne visited two villages of the Pawnees situated on a small stream some six leagues west of the Arkansas, probably in what is now Oklahoma. In

TRIBE	FIRST VISIT	FIRST MENTION OF HORSES
Arapaho	1804 Lewis and Clark	—
Arikara	1738 La Verendrye	1738 La Verendrye
Assiniboine	1658 Jesuits (?)	1742 La Verendrye, Jr.
Blackfoot	1751 Saint Pierre	1751 Saint Pierre
Cheyenne	1680 La Salle	—
Comanche	1714 La Harpe	1714 La Harpe
Crow	1742 La Verendrye, Jr.	1742 La Verendrye, Jr.
Gros Ventre	1784 Umfreville	1784 Umfreville
Hidatsa	1738 La Verendrye	1741 La Verendrye, Jr.
Kansas	1601 Oñate	1755
Kiowa	1682 La Salle	1682 La Salle
Iowa	1676 Zenobius	1724 Mead
Mandan	1738 La Verendrye	1742 La Verendrye
Missouri	1682 Tonty	1682 Tonty
Omaha	1761 (?)	—
Osage	1694 Gravier	1719 Du Ti-né
Oto	1680 La Salle	—
Pawnee	1541 Coronado (?)	1704 Dunbar
Plains Cree	—	1738 La Verendrye
Ponca	1804 Lewis and Clark	—
Santee	1662 Radisson	1740 Peter Pond
Sarsi	1784 Umfreville	1784 Umfreville
Snake	1742 La Verendrye	1742 La Verendrye, Jr.
Teton	1680 La Salle	1742 La Verendrye, Jr.
Wichita	1541 Coronado	—

If these dates for first mention of the horse are tabulated or plotted on a map, we have a progressive series northward, beginning with 1682 and culminating on the Saskatchewan in 1751. In every case, however, we must assume an earlier date for its introduction. There is no good reason why the Pawnee should not have had horses in 1650 or even in 1630, since they were available in the these villages he found 300 horses 'which they value very highly, and could not do without.' He procured from them two horses and a mule marked with a Spanish brand. Five years later Bourgmont endeavored to secure by trade with the Kansas a sufficient number of horses for his journey to the Paducas [Comanche] in western Kansas. They were unable to supply him with more than seven, and one of these was stolen by an Iowa Indian, who eloped thereon with a Kansas maiden to his own people. The Paducas, who seemed to be on good terms with the Spaniards, said they obtained their horses from them by barter, and that they had not yet been able to raise any colts."—Transactions of the Kansas State Historical Society, vol. x, 1907-1908, p. 107, footnote.

Spanish and Pueblo settlements of New Mexico. On the other hand, the progressive nature of our data from southeast to northwest may be entirely due to the gradual extension of exploration, and so have no other significance. For example, it is only in case of the Assiniboine, Cree, Eastern Dakota, Mandan, and the tribes in Iowa, Wisconsin, and parts of Illinois that we have evidence of their existence without horses, and even in these cases we can only say that explorers did not mention them.

In this connection we may give brief consideration to the use of horses east of the Mississippi. From the very first, the Spaniards were great importers of horses and other domestic animals. In this respect they stand in contrast to the French of Canada where the first horse (just one) was imported in 1647, the first cargo in 1665.¹ The English colonists imported horses moderately, except in Virginia, where the cavalier element, as among the Spaniards, brought in the horse, and where in 1669 wild horses became a pest. The first horses imported by the New England colonies came in 1629. Horses spread among the Indians of the Atlantic slope, but it was only in the south that they were numerous. According to Adair the Cherokee and other southern tribes were good horsemen. While these Indians could have secured their stock from Virginia, it is much more probable that they first came from Spanish settlements on the Gulf and even from the tribes west of the Mississippi. According to Swanton, Du Pratz and others speak of horses as numerous in the south and note that they seem a different variety from the European horse, which suggests the Indian horse of the west.

Adair gives us a good description of the riding gear of the Choctaw and other southern Indians. They had the rope for a bridle, made saddles with wood and green buffalo hide, and mounted from the "off-side," in all of which he recognizes the Spanish type and which reminds us of the Plains.² Even the saddles made by the Iroquois of New York are of this same western Indian type. All this strongly suggests that the dominant traits of horse culture among all the south Atlantic Indians came from across the Missis-

¹ Charlevoix, Shea edition, vol. 3, p. 83.

² Adair, James, *History of the American Indians*, London, 1775, p. 426.

ssippi, or at least indirectly from the same source as the western culture. The ultimate source was most likely the Spaniards. The French are a negligible factor because they settled at the mouth of the Mississippi after the horse had reached the Missouri. Even the English settlements in Virginia scarcely reached a point where they could supply horses to the Indians of the east before horses are reported in the west. It seems therefore clear that the Spaniards must be credited with the introduction of the horse to the Indians of the Plains and the lower Mississippi both east and west; the greater number of horses must have come from their more numerous settlements in the Southwest and Mexico.¹

As to the Indians north of the Ohio we have very little data, but the Wyandot are said to have first secured horses at Braddock's defeat (1755).² The Kansas also returned with horses during the same war.³ From Tanner's narrative it appears that the Indians around Detroit in 1775 made some use of horses. In a treaty made with the Sauk and Fox in 1804 it was stipulated that they return all stolen horses.⁴ From what information has come to hand it appears that before the French and Indian War horses were scarcely

¹ The first accounts we find for English exploration in the interior of the Southern States have been made available by Alvord and Bidgood (*First Explorations of the Trans-Allegheny Region*, Cleveland, 1912). The period covered is 1650-1674 and the territory the Appalachian region. No mention of horses in the hands of Indians is made, but the explorers and traders used horses and often left them with the Indians for safekeeping. The Cherokee towns on the Virginia frontier were usually the base of operations. Thus, it is certain that these Indians had an opportunity to acquire horses during this period; but they had had some contact with Spanish traders for almost a century. In Adair's day chickens and hogs were abundant among the Indians, but as early as 1699 the French found chickens abundant in the Houma villages. Needham and Arthur found wild hogs abundant in Georgia in 1674. When the French settled Louisiana they found peaches and figs under cultivation. These could scarcely have come from the English settlements of the Atlantic. Smith (*Anthropological Papers*, American Museum of Natural History, vol. 6, p. 208) reports impressions of peach stones on pottery from a Kentucky site in which no traces of trade articles were found. At a very early date the Iroquois were raising peaches and apples. We have here a subject for investigation, but it is clear that the Southern Indians quickly took up certain traits brought in by the Spaniards whenever these happened to fit into their original culture.

² *Transactions of the Kansas State Historical Society*, vol. ix, p. 79.

³ *Ibid.*, vol. x, p. 331.

⁴ *Ibid.*, vol. xi, p. 334.

used in the Ohio valley and the Great Lakes country. Yet at this date they were in general use among the Indians of the South Atlantic and Gulf states and among all the tribes west of the Mississippi from north to south. We have previously noted the relatively late introduction of the horse to the tribes along the upper Mississippi.

The phenomenon we have is now plain: Indian horse culture spread rapidly from the Spanish settlements of the Southwest and Mexico upward between the Rocky mountains and the Mississippi river, and thence northward between the Missouri and the mountains, to the west of the Black hills and thence to the Saskatchewan country. On the south it spread out over the Gulf states, but did not become prominent north of Virginia, or between the Ohio and the Great Lakes, and reached the upper Mississippi relatively late. It reached the lower Colorado on the west, but did not reach far into California or any part of the Pacific coast to the north. Likewise it reached up into the Plateau area, and even to the Déné area.¹

The subject we have chosen for discussion is the relation of horse culture to other Plains traits and not the historical investigation of the introduction of the animal by Europeans. The preceding data are presented solely to define the problem and make no claim to completeness. However, we cannot well discuss the influence of horse culture without fixing its relative time of origin, for, if it greatly preceded other strong European influences, its value as a cultural characteristic is high. While the fixing of such a date is quite speculative, we have its limits clearly defined, for we find the horse in the far north in 1751 and know that it could not have reached the Indians before 1500.

It is generally considered that horses abandoned by De Soto's men in 1541 gave rise to the wild horses later found west of the lower Mississippi. This may be true. Recalling that at about the same time Coronado reached the Wichita, we have an increased probability that the nuclei of several wild herds were formed about this date. However, we have found no historical support to this

¹ See Lewis, A. B., Tribes of the Columbia Valley and the Coast of Washington and Oregon, *Memoirs of the American Anthropological Association*, vol. 1, part 2.

theory, for the first mention of wild horses is much later.¹ However, it may be that the Indians profited by the use they saw made of horses and took possession of some abandoned animals. This would not have been difficult. The Pawnee have a story that the first horse they ever saw came into their village and permitted itself to be handled. Such could have happened with domesticated horses just turned loose. In other words, a normal series of events could have placed the horse in the hands of Indians and at the same time started the wild herds. If this did happen in 1541, 1560 could have found several tribes in the south well mounted and far advanced in horse culture. Then we must not overlook the tribes in southern Texas who even in 1541 could have easily reached Spanish posts on the other side of the Rio Grande. So 1600 could have found the horse at the headwaters of the Missouri and even among the Blackfoot. This is, of course, speculation, but it is well to note that for all we know the Crow and the Blackfoot, for instance, may have had horses for 150 years before their first mention in 1742 and 1751. In other words, we have an interval from 1550 to 1850, or three hundred years, in which the horse culture of the Plains could have developed along its own lines.

It seems quite reasonable to assume that horse raiding by the Pawnee and Kiowa had begun in the early years of 1600. If this is correct and these historic tribes were then in the same relative positions as later, 1650 should have found the horse abundant on the Saskatchewan. At least, we have positive historical data for the general use of the horse throughout all the area from the headwaters of the Saskatchewan, down the west of the Missouri and thence to the Mississippi by 1751, and data that make clear the possibility of such distribution as early as 1650. The tribes west of the Missouri and the lower Mississippi were practically free until after 1840 and, while subject to some cultural influence and external control before that time, were on the whole about as free to develop their culture as they could have been before the period of discovery. We thus have a positive period of one hundred years in which the Indian was fairly free to develop his horse culture

¹ Hendry (*op. cit.*, p. 335) saw wild horses on the Saskatchewan in 1753.

and a very probable period of another one hundred years in which many of the tribes were in no direct contact with whites of any description. We thus have a unique example of the development of a culture trait in response to contact with another culture and its transmission from one tribe to another among several distinct linguistic stocks, all of which suggests several important analytic problems.

Thus we may ask—

1. Is the Plains culture as a whole older than the introduction of the horse?

2. What changes in culture traits can be attributed to the influence of horse culture?

3. What had the environment to do with the distribution of horse culture?

If we take up the first and look for traits older than the introduction of the horse, we can lay hands upon at least one such. The use of dogs for transporting baggage is mentioned by Coronado's men, a date before the era of the horse. Furthermore, we have linguistic evidence in the names for horse, such as "mysterious dog" and "elk-dog," certainly implying a resemblance in the uses of the two animals. We should expect no one to doubt the assumption that dog traction, one of the most distinctive traits of Plains culture, was fully diffused over the area before the horse was known.

As to the tipi in the form familiar in the nineteenth century, we are far less certain. Obviously dogs could not have transported the tipi of horse days with its long heavy poles and bulky cover. Descriptions of the tipi have not been found by us at a period when the horse was unknown. The tents mentioned by Castañeda appear to be tipis, but we cannot be sure of their detailed structure. They were, however, transported by dogs. The distribution of the tipi among a few of the Central Algonkin and its analogous forms to the eastward among the Cree, may warrant a guess that it was diffused over the Plains in some form along with dog traction; but a mere guess will not help us here. However, in another place we have called attention to the apparent relation between the travois and dragging tipi poles. The horse travois is made of tipi poles

and the few dog travois we have seen had their poles pointed at the butts precisely like the tipi poles. Yet the true travois was found in the northern part of the Plains; the tribes of the south placed the load upon the horse and dragged the tipi poles at the sides. In Castañeda's time this was the way for dogs. In short, there are several reasons for assuming that the northern travois was developed from the tipi poles dragged by dogs. If we accept this explanation, it is clear that a tipi of some form and the travois are historically associated and that the former is the older.

Turning to less material things we may cite the coup and methods of warfare. It would seem that since almost everywhere in the Plains a war party set out on foot, even though they went after horses, it is safe to assume that the entire procedure had become a fixed custom before the advent of the horse. The coup is so fundamental a matter in the warring system of the Plains that it also must have been there for a long time. This, however, is not a strong argument.

As to the sun dance and the camp circle, two associated traits, we have no evidence. The same is true of the police, or soldier system and societies for men. Yet there is one kind of evidence that applies in a general way to all traits: viz., historical tradition. As a rule, the Indians themselves are positive that the acquisition of horses was much more recent than the sun dance and other important traits of culture. While this has some weight we must not value it too highly, for the sun dance itself was but recently introduced to some of the Ojibwa and there are no good reasons why it could not have spread rapidly over the Plains at any time.

If we turn to some of the intermediate tribes, like the Mandan, we can prove by archeology the existence of the earth-lodge before the horse. Maize also was among the Mandan. It seems most certain that Mandan culture was essentially developed long before 1738.

The net result of this survey is, then, that we have positive evidence of the dog travois development before the horse, but that on other traits of culture we have only presumptions for the area at large.

If we turn to migration the case is equally difficult, for evidence of real migration in the Plains is rare. The Cheyenne are the one clear case, but it seems that the first stage of this southern movement must have occurred even before horses reached them. If we take the Blackfeet, we find them mounted when first discovered, but occupying practically the territory of later years; that they as a people developed elsewhere may be, but they could scarcely have migrated during the years between getting horses and the record of them in 1754 or even earlier without having traditions of such a movement as definite as their traditions that horses were acquired from other tribes. Likewise the Pawnee did not change their habitat until moved by pressure of the Government.

It may be correct to interpret the general tendency of all the surrounding tribes to raid the Snake as due to the latter's possession of horses and lack of firearms with which to repel the invaders. The Pawnee with the sons of La Verendrye in 1742 turned back at signs of Snake camps, indicating that they were a power to be considered. Blackfoot traditions indicate that in early days the Snake were frequently found hunting on the upper Missouri, but were eventually pushed back because they lacked firearms. If we accept this at its face value, we see that while it is probable that the presence of the horse urged the Snake eastward into the Plains like their brothers, the Comanche, this was equalized by the superior arms and plundering ambitions of other tribes. Thus, in respect to the Snake, the horse could have extended their ranges only to the north and west, if indeed it had any effect.

It is true that some small movements seem to have occurred, but these are not very significant and those of which we have historical knowledge took place chiefly among the tribes along the banks of the upper Mississippi where the horse was introduced last. In fact, very few of the Plains tribes are known to have permanently shifted their homes during the period 1680-1860. We must therefore accept their positions as we find them at the opening of the historical period.

There is, however, a modified form of migration that must be noted—the practice of going on periodical hunts, when the whole

social unit moved and killed buffalo as an organized body. Of the typical tribes we have definite statements from the Blackfoot and the Teton-Dakota that they had permanent winter camping places from which they set out in the spring and to which they returned in the autumn.¹ Their ranging was usually within recognized limits. That they also camped in winter and roamed in summer before the coming of the horse is probable. The agricultural tribes of the eastern border, such as the Pawnee, Osage, etc., were in historic times given to the planting of their fields and then setting off on a grand hunt. That this was not unknown before the time of the horse is suggested by Perrot's account of the Illinois.² While this proves nothing as to the true Plains tribes, it raises a strong presumption that the periodical hunt of the Pawnee, etc., cited above, was practised in pre-Columbian times; so the custom observed in horse days was merely a shift from dog to horse travois, and from walking to riding, and not strictly a new trait. Indeed, why should the Plains people have had the dog travois if they did not go on long journeys by land? Hence, I believe it must be granted that the circumscribed ranging of the Plains tribes was a cultural trait before the advent of the horse.

On the other hand, the horse may have intensified this ranging and even extended it to the final extinction of maize planting. Thus Maximilian says of the Ponca:

"They formerly lived, like the Omahas, in clay huts, at the mouth of the river, but their powerful enemies, the Sioux and Pawnees, destroyed their villages, and they have since adopted the mode of life of the former, living more generally in tents made of skins, and changing their place from time to time. . . . They plant maize, which they sell to the Sioux, but they had neglected to cultivate this grain for about three years, and obtained it from the Omahas."³

¹ Mooney has made an argument for the migration of the Kiowa from Montana to their present location 1780-1832 (Seventeenth Annual Report, Bureau of American Ethnology, part 1), but Scott dissents, bringing both historical and traditional evidence of their position south of the Pawnee before 1681 (American Anthropologist, n. s., vol. 13, p. 372). Both may be correct, for the presence of the Kiowa in the north may have been due to their periodical wanderings.

² Perrot, *Nicolas, Indian Tribes of the Upper Mississippi, etc.*, Cleveland, 1911, p. 119.

³ Maximilian, *Prince of Wied, Travels in the Interior of North America*, translated by H. Evans Lloyd, London, 1843, p. 137.

The Comanche were the great horse Indians of early days. The Pawnee say that in former times other tribes named them horse Indians. The sons of La Verendrye met those they called Horse Indians, west of the Black Hills in 1741. There is said to be good evidence that they ranged even to the mouth of the Yellowstone. It seems but fair to assume that such an extensive range came after the use of horses. There are some traditional data, as for example, the Blackfoot believe their frequent journeys to the Missouri were not undertaken before they acquired horses. However, such evidence must be taken with reserve, for even in later times Blackfoot war parties to the Crow and to the Dakota country usually set out on foot.

Perhaps with more search we could find indications that the coming of the horse extended the range of the tribes. The possession of this new means of transportation and this new element of property would no doubt act as a cultural stimulant. The Pawnee must have been at the flood-tide of their national life during the period 1700-1800. The Blackfoot seem to have reached theirs even at the time of Hendry in 1754, at which time the entire population rode horseback. Our difficulty here as elsewhere arises from the fact cited above that the horse reached many of the tribes before they came to the knowledge of explorers. Yet, if we take the available data into consideration there is good ground for the assumption that the most typical tribes all reached the high-water mark of expansion and culture in the eighteenth century.

We must not, however, too hastily conclude that the introduction of the horse during the seventeenth century was the chief cause of this. The presence of the white traders on the continent must be considered. Firearms were soon in the hands of the tribes along the Mississippi and so spread westward. These new weapons must also have brought feelings of power and confidence. Then again the trade by which they were received created new demands, new wants, and so stimulated production. Thus, it seems equally probable that the disturbed balances of power from the introduction of guns and the necessity of visiting regions adjacent to trading posts, must have exerted a strong influence upon the periodical

ranging of tribes, a change in which the horse was undoubtedly a large factor, but not the only one.

We may recapitulate then by stating that while there is a presumption that the horse stimulated periodic ranging on the Plains, there were other factors capable of exerting similar influences; but that actual migration was due to the horse is quite unlikely. The existence of former periodic ranging is proven by historical evidence in some cases and made inferential in others by the previous development of dog traction. In short, we may say that only those traits directly associated with the horse can be taken as later; the most characteristic traits, for want of evidence to the contrary, must be given priority, and that while the horse along with other European influences may have intensified and more completely diffused the various traits, there is no good evidence at hand to support the view that the horse led to the development of the important traits. In other words, from a qualitative point of view the culture of the Plains would have been much the same without the horse. It does not follow though, that these Plains traits were diffused over the same area as found in 1850. For example, the characterization of the southern Plains Indians in the Icazbalceta¹ manuscript can scarcely be improved upon as defining the Plains type of culture, but we have no way of determining its extent.

We may be reminded that in the Plains area are several subtypes of culture. There are first of all the nomadic tribes of which the Blackfoot, Crow, Teton, Kiowa, Arapaho, Cheyenne, and Comanche may be taken as types. These are the great horse and buffalo Indians as we know them. They ranged north and south in the true plains while on either border were tribes of less intense culture and varied by additional traits. Our problem, therefore, is as to whether the development of this typical group in which the horse seems so important a factor did not occur after the acquisition of the horse. If so, then the true Plains culture may properly be said to have developed with the introduction of the horse, even though every trait may have been in existence somewhere in the area long before. A rather extended argument could be presented on this point, but a few suggestions must suffice.

¹ Winship, *The Journey of Coronado* (1904 edition), p. 194.

1. Though true migration since horse days is rare, there is a very strong presumption that several of these typical tribes had scarcely reached their historic ranges by 1600; and in that event could scarcely have developed their present culture before the horse came.

2. The high tide in typical Plains culture seems to have come in the eighteenth and nineteenth centuries. While this was the era of trade, yet the horse increased the economic prosperity and created individual wealth with certain degrees of luxury and leisure; also it traveled ever ahead of white trade and the white trader.

3. The horse was a great inciter of predatory warfare which must have increased the range and intensity of operations, thus intensifying tribal contact and increasing intertribal knowledge, all of which would favor diffusion.

4. The culture of these tribes takes its individuality from apparent adjustments of traits to a more nomadic and intense form of life, the practical inhibition of such traits as pottery, basketry, agriculture, and fixed houses; rather than from the introduction of any new traits except those directly associated with the horse.

Hence, we may formulate for further consideration the proposition that while no important Plains traits except those directly associated with the horse seem to have come into existence, the horse is largely responsible for such modifications and realignments as give us the typical Plains culture of the nineteenth century, or which differentiate it from the subtypes in the same area. Thus we can see how practically all the essential elements of Plains culture would have gone on, if the horse had been denied them; but it is difficult to see how the vigor and accentuated association of traits forming the typical group and their intense occupancy of the true plains could have been what it was in 1800 without the horse. A type of culture, we should note, is the conception of an associated group of traits, and it is the manner of the association rather than the identity of the traits that determines it.

We may now turn to a more specific examination of the point as to what distinct modifications of culture were produced.

In the first place, the horse brought with it all its own associated

elements of culture. Our collections show that saddles and other riding gear are quite uniform in type for the Plains and are on the whole after Spanish patterns. Even the use of the reata seems to be of Spanish-American origin. Riding itself was, of course, intrusive. Knowledge of how to care for horses would also come in from the Spanish. So we must surely have had a whole group of associated culture traits carried along with the horse.

Thus we have a fine example of diffusion, like the sun dance, men's societies, etc. Could we show that the diffusion of horse culture preceded the diffusion of these other traits, we should have a strong case for the horse as a modifier of culture. As we have seen, what little evidence there is points in the other direction.

The use of the horse in war and hunting may have greatly modified weapons, tactics, etc. Thus, it seems quite probable that the long spear of the Comanche and other southern tribes was developed for use on horseback, possibly even copied directly from the Spaniards. Yet we are dealing with elements of associated horse traits, constituting the horse cultural complex. Our problem is, however, as to whether there are other complexes created or modified indirectly by the presence of the horse. In this connection we can offer little save speculation. As we have so far developed the subject there is some reason for expecting that the relative intensities of many traits were changed, giving us a different cultural whole. We have noted the probability that horse culture inhibited tendencies toward agriculture, pottery, and basketry, and favored the use and development of the tipi; but our observations can apply only to the less typical tribes who had these traits, since their mere absence is not satisfactory evidence of inhibition. As an intensifier of original Plains traits, the horse presents its strongest claim. Some of the early Spanish observers note the great use of large dogs, both for packing and travois traction, and the almost entire dependence on the buffalo; here we have at least some of the highly characteristic traits of Plains culture in horse days. To such a culture the horse would most surely be a new and superior dog; he would like any greatly improved appliance enrich and intensify development in certain established direc-

tions. It is also conceivable that this development had a similar effect on other material traits, but to varying degrees. We see, however, no good ground for assuming that any important traits, material or otherwise, were either dropped or added among the buffalo-hunting dog-using rovers observed by the first Spanish explorers. Economic prosperity and contact with the white race have greatly modified the material culture of the Indian, physiologically by interbreeding and disease it has brought marked changes and politically it has stamped out his own government; but not even the great wealth of the Osage or the Pawnee has served to modify greatly their religious practices or their social ideals. It is chiefly the persistently driven wedge of the missionary and the teacher that is slowly overcoming that tenacious phase of culture. The familiar phenomena of tenacity of hold upon tribal religious, medical, and social practices seems a good argument against the great effects of new material traits upon culture in general. Thus, it would be exceptional to find that the introduction of the horse was alone responsible for the typical Plains culture.

We have noted the peculiar distribution of the horse, how it spread rapidly east and west of the lower Mississippi and especially on the west passed quickly northward, but west of the Missouri. We thus have the section between the Missouri and the Mississippi and eastward between the Ohio and the Lakes, in which horse culture made its appearance late, if at all. We noted also its failure to make progress in California. It has been suggested many times that the distribution of the horse was correlated with the geographical environment, but the causes for the above phenomena are by no means obvious. Thus, it is fair to ask what would have been the area of diffusion in a wild state if introduced over the Mexican frontier. In such a region the horse would live somewhat like he did upon the great ranches of some years ago, from which we might infer that the distribution would follow the boundaries of the grazing industry. The grazing area is fairly well defined—a broad stretch east of the mountains and through western Kansas and Nebraska, parts of the Dakotas west of the Missouri, and a small section of the Saskatchewan country. Ranchmen have said

that this area was marked by peculiar short grasses that cured well and furnished good winter grazing, also that the snow did not lie deep enough to prevent grazing except for very short periods. While this may be true, it does not follow that the horse in a wild state would confine himself to this area, for the buffalo did not. While this horse-using Indian area is in a way coincident with the grazing area, we have not fallen in with any study of the reasons why grazing was so confined. It is quite possible that it was largely accidental and due to political and economic factors, such as relatively greater profit from agriculture east of the range, the direction of settlement, etc. Thus, unfortunately, no one has worked out this problem for us, so that we can only recognize a presumption that the region offered very favorable conditions for the inclusive diffusion of wild horses. The significance of this point lies not in the natural diffusion of horses, for the Indian was not by any means a passive factor in the case, but in its bearing upon the care given horses by their owners. Here again we lack information. The corn-raising tribes were the only ones producing suitable food for horses; they were also the only ones having buildings capable of sheltering horses. Thus Maximilian says of the Mandan:

"Inside of the winter huts is a particular compartment, where the horses are put in the evening, and fed with maize. In the daytime they are driven into the prairie, and fed in the bushes, on the bark of poplars. There are, probably, above 300 horses in the two Mandan villages."¹

From Dunbar's account of the Pawnee we read:

"They went into winter quarters in some place where water, wood and unburnt grass in abundance for the horses were to be had. Here they remained till forage became scarce, when another place was sought. If grass could not be found in sufficient quantity, they cut cotton-wood trees, and subsisted the horses on the bark and tender twigs. The return to the villages did not take place till young grass was started in the spring."²

The Crow, according to Maximilian, possessed "more horses than any other tribe of the Missouri, and to send them in the winter

¹ Maximilian, *Prince of Wied, Travels in the Interior of North America*, translated by H. Evans Lloyd, London, 1843, p. 272.

² *Magazine of American History*, 1882, vol. 5, no. 5, p. 332.

to Wind River, to feed on a certain shrub, which soon fattens them" (p. 175).

Thus it is apparent that the Indians did take some care of their horses. In case of the Pawnee they roamed toward the "range area." Yet all the typical tribes of the Plains from the Assiniboine of the north to the Comanche of the south had no buildings large enough to shelter horses, nor have we any record of their preparing hay or other feed for winter. Hence, in the main the horses of these Indians must have bred under conditions similar to those of the range in later times. Yet that this selective influence would cause the horses of tribes along the upper Mississippi to die out cannot be entertained, because each spring they could be replenished by raids upon their horse-using neighbors, and again it was these eastern tribes that raised an abundance of maize from which horses could be fed.

Another point is as to the success of the Indians in breeding horses. Here again we lack good data. J. C. Mead states that the "Paduca [Comanche] who seemed to be on good terms with the Spaniards, said they obtained their horses from them by barter, and that they had not yet been able to raise any colts" (1724).¹ Yet the herds of Indians must have increased because the Indian horse was a type of its own. Many tribes had special medicine formulæ for increasing the number of their colts. Again, we note that Marcy (1852) found the Comanche still dependent upon theft or trade:

"But as they have no commodity for exchange that the traders desire except horses and mules, they must necessarily give these for the goods, and large numbers are annually disposed of in this manner. As I have before mentioned, nearly all these animals are pilfered from the Mexicans; and as the number they traffic away must be replaced by new levies upon their victims, of course all that the traders obtain causes a corresponding increase in the amount of depredations."²

Spanish brands were noted by Umfreville on the Saskatchewan in 1784, and it is a fair assumption that the asses seen by Hendry

¹ Kansas Historical Society Collections, vol. x, p. 107.

² Marcy, *Exploration of the Red River of Louisiana*, p. 106.

among the Blackfoot in 1754 also found their way by theft and trade northward from Mexico.

Thus, while a supply of horses was constantly introduced by predatory warfare upon the Spanish settlements and passed along northward by theft or native trade, we have on the other hand the existence of a more or less distinct type of Indian horse which suggests a certain amount of breeding. There were, however, herds of wild horses in parts of the area with which this so-called Indian type of horse may be associated.

While we have no direct data as to the extent of Indian propagation, we have the experiences of the Government in adapting the Indians to reservation life. Horse raiding was broken up with great difficulty, and it was many years before the Indians made any headway with the increase of their own herds. This seems to imply that the traditional as well as the ideal way to acquire horses was by raiding. The environmental problem thus shifts from horse to man, the question being as to whether there were geographical causes restricting raiding to certain regions.

The area in which such raiding was most in evidence was the region west of a line extending due south from Lake Winnipeg to the Missouri and thence along that river and the Mississippi to the present boundary of Louisiana, thence southwestward to the Rio Grande. In raiding one must expect active pursuit. As the source of supply for horses was to the south, the tribes above the Missouri and the Ohio must needs have crossed over the Missouri or the Mississippi for their booty and likewise have ferried or swam their horses over on the return trip. This would be difficult under ordinary circumstances, but in a running fight would be disastrous. That the Indians of the Southeast did ferry horses across the Mississippi is most certain, but on the other hand, they did not develop horse raiding as the leading feature of warfare. The westward expansion of the English colonies did not place horses within striking distance of the Illinois tribes until long after horses were numerous among their western neighbors. Hence, our data seem to favor the view that the early spread of the horse northward west of the Missouri and not eastward was due to the physical barriers presented by the river.

Still we must consider the possibility of ethnic factors, or ethnic differences, between these two regions. Nothing appears in the material culture of the Illinois and their neighbors that would offset the value of the horse for hunting and war, unless it be canoes. Their use for river travel was quite characteristic of the region and was adopted by the French. It may well be that the whole tendency of the French colonists to do without horses was due to their having taken up the canoe culture of the Indian. In no part of the great canoe area did horse culture secure a strong footing. While we must not give too much weight to this, it is reasonable to assume that where canoe travel was well developed, the value of the horse would be less. Hence, the canoe culture of the region we are considering may have offered effective resistance to the early diffusion of the horse. Obviously the horse could not be substituted for the canoe as readily as for the dog.

The net result of this inquiry has then been to give some weight to the interference of canoes and to make quite probable the influence of the Mississippi and the lower Missouri rivers as physical barriers to the northeastward spread of the horse by raiding. Both are doubtless correlated and to a large extent environmental factors. As to the presumption that the kind and quality of pasturage may have been an important factor, we find little support.

Finally, among the ethnic factors we may consider relative tribal efficiencies as horse culture carriers.

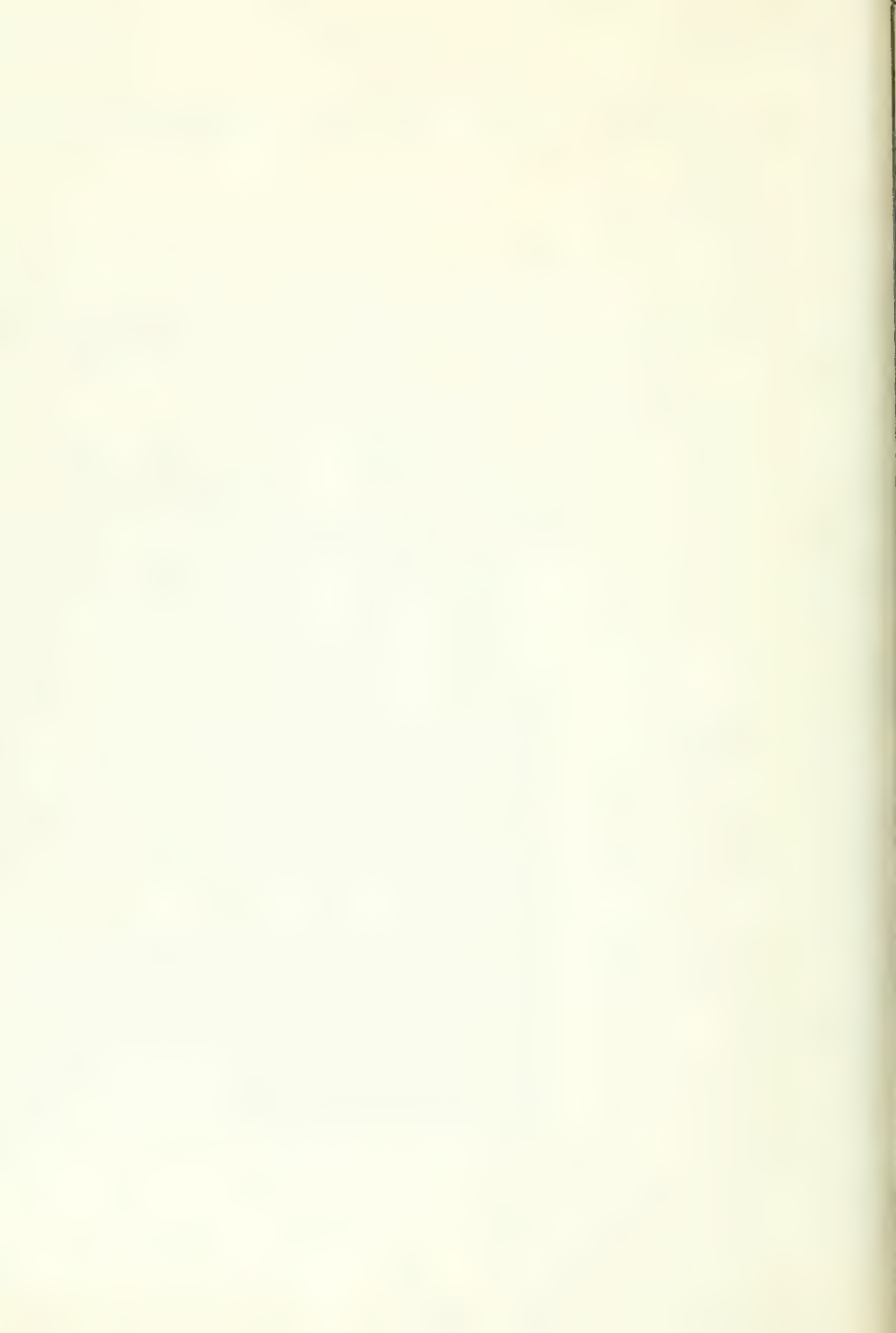
Our data on the northern plains point toward the Shoshone (Snake) as the chief distributors, but we can get no historical light on their relations with the Spaniards. We do know, however, that the tribes now at Fort Hall, Idaho, and those at Wind River, Wyoming, formed a fairly homogeneous group and still regard themselves as close relatives. Their range seems to have been from eastern Colorado to the headwaters of the Missouri and westward. It is probable that in 1600 the Comanche were also a part of this group. Thus, while we lack definite historic data as to contact with the Spaniards, we have both territorial and ethnic conditions for the ready diffusion of horses among the Shoshone. If the Wind River division was not in direct contact with the Spanish settle-



ments, they were within striking distance of the Pawnee. This, taken with the direct testimony of the Blackfoot as early as 1751 and the still earlier statement of La Verendrye, makes a strong case for the Shoshone as the horse carriers to the Saskatchewan country and all points above the Platte.

As evidence for the existence of a trade or plunder channel by which horses could readily pass from the Spanish settlements to the Saskatchewan, we may note that Hendry saw asses among the Blackfoot in 1754, a few years later Cocking saw mules, and later Umfreville (1783) saw horses with "Roman capitals burnt in their flanks with a hot iron." We have no evidence that asses and mules were propagated by the Plains Indians, and above all the brands must certainly have been placed by Europeans. Further, the Blackfoot traditions are that their supply of horses came from the Snake and the Flathead. Thus, with the Shoshonean link we have direct contact between the headwaters of the Rio Grande and the Saskatchewan. We see further that the Crow, Teton, Arapaho, Kiowa, Pawnee, and later the Cheyenne were in direct contact with the long range of the Shoshone. This also explains the early appearance of the horse among the Nez Percé and some of the Salish. As active carriers of horse culture the Shoshone must have exerted considerable influence on the early material culture of the typical northern Plains tribes, a phase of the problem we shall discuss elsewhere. In this connection they are an offset against the assumed influence of environment in turning horse culture to the west.

While the problem we have discussed is far too complex to permit a paper of this kind to be more than a suggestion of new lines of research, the following conclusions seem permissible: The horse reached most, if not all, of the typical Plains tribes from three hundred to two hundred years before they lost their cultural independence. In its diffusion over the area a large number of associated traits were carried along as a whole, or as a cultural complex. At least some of the tribes had developed dog traction to meet their nomadic wants before the horse came, and needed, therefore, but to substitute the horse for the dog in their own dog-culture complex and to



take over the necessary parts of the Spanish horse-culture complex. Thus among the less sedentary tribes the whole basic structure of the later horse Indian culture was in existence when the horse came. We have found no reason to believe that the introduction of the horse did anything more than intensify and perhaps more completely diffuse the cultural whole previously formed. As such, however, it seems responsible for reversing cultural values in that the earlier dominant sedentary cultures of the Siouan and Caddoan tribes were predominated by the Shoshone and other formerly struggling nomads of their old frontier. As the leading horse carriers, the Shoshone played a large part in this development, but they lacked many of the strong cultural traits which the Crow, Teton, etc., received from the original Plains culture, in consequence of which they now fail to qualify as typical tribes. Finally, it appears probable that the accidental presence on the New Mexican frontier of a well-developed dog-traction culture was the chief determining factor in the direction of horse-culture diffusion though there were other ethnic factors as well as environmental conditions that could have contributed to the result.

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